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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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EXAMINER

QM22/1023

DOANE SWECKER & MATHIS
SUITE 400
1737 KING STREET
ALEXANDRIA VA 22314-2727

ART UNIT, PAPER NUMBER

DATE MAILED

10/23/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

09601382

Applicant(s)

Rubert et al

Examiner

Blount

Group Art Unit

3726

—The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address—

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

Status

- ☐ Responsive to communication(s) filed on _____.
- ☐ This action is FINAL.
- ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- ☒ Claim(s) 14-21 is/are pending in the application.
- Of the above claim(s) _____ is/are withdrawn from consideration.
- ☐ Claim(s) _____ is/are allowed.
- ☒ Claim(s) 14-21 is/are rejected.
- ☐ Claim(s) _____ is/are objected to.
- ☐ Claim(s) _____ are subject to restriction or election requirement.

Application Papers

- ☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.
- ☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.
- ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- ☐ The specification is objected to by the Examiner.
- ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119 (a)-(d)

- ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
 - ☒ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been received.
 - ☐ received in Application No. (Series Code/Serial Number) _____.
 - ☒ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

Attachment(s)

- ☒ Information Disclosure Statement(s), PTO-1449, Paper No(s). 5
- ☒ Notice of Reference(s) Cited, PTO-892
- ☐ Notice of Draftsperson's Patent Drawing Review, PTO-948
- ☐ Interview Summary, PTO-413
- ☐ Notice of Informal Patent Application, PTO-152
- ☐ Other _____

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DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 14-21 are rejected under 35 U.S.C. 112 second paragraph for failing to particularly point out and distinctly claim the subject matter which applicant regards as their invention.

In claim 14, it is stated that machining is carried out by moving at least one tool “translationally and parallel to the substrate”; however, in figure 5B, this step, corresponding to pages 11-12 of the written portion of the specification, shows the process to occur perpendicular to the substrate. Also, the phrase “simultaneously with first step or after the latter, a second step...” is indefinite, as a second follows a first step by definition of the term. In claim 16, a step for obtaining a result is claimed, but no positive act is performed.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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4. Claims 14, 16-17, and 19-20 are rejected under 35 U.S.C. 102(b) as being anticipated by either U.S. patent 3,748,724 to Beasley, or U.S. patent 5,557,836 to Smith et al.

With regard to claim 14, Smith teaches forming a microrelief by mechanical machining of the substrate (see figure 16), and, afterwards, performing more of these such steps to cut out the microcomponents. See abstract. Beasley teaches this as well (see abstract).

With regard to claim 16, column 6, lines 60+ of Smith et al teaches forming the grooves in such a way as to produce an "optical quality"; col 2, lines 60+ of Beasley teach forming grooves to a depth that produce right triangular corners, which can then be used as a reflector.

With regard to claim 17, a single tool is described in col 9 l 13+ of Smith, and in the abstract of Beasley.

With regard to claim 19, Beasley, in the abstract, teaches the use of a rotatable cutting tool (ie, a saw) that is moved along 1 direction at at time.

With regard to claim 20, microprisms are formed in both Beasley and Smith et al.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claim 15 is rejected under 35 U.S.C. 103(a) as being obvious over either U.S. patent

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3,748,724 to Beasley, or U.S. patent 5,557,836 to Smith et al, in view of U.S. patent 3,712,706 to Stamm.

(Either Beasley or Smith et al) teach the invention as described above, but do not teach finishing the microprisms. This is taught in column 21, lines 20+ of Stamm.

It would have been obvious to one of ordinary skill in the art at the time of the invention to have polished the microprism faces of (Either Beasley or Smith et al), in light of the teachings of Stamm, in order to provide an optical surface which reflects light well.

7. Claim 18 is rejected under 35 U.S.C. 103(a) as being obvious over U.S. patent 3,748,724 to Beasley.

Beasley teaches the invention as described above, but does not teach using multiple tools (ie, circular saws) to form the microreliefs.

Official notice is taken that it is well known in the art to include a multiplicity of work tools to carry out an operation, and that it would have been obvious to one of ordinary skill in this art to have used more than one tool to cut the grooves, in view of this fact, in order to expedite the cutting of the grooves in the substrate.

8. Claim 21 is rejected under 35 U.S.C. 103(a) as being obvious over either U.S. patent 3,748,724 to Beasley, or U.S. patent 5,557,836 to Smith et al in view of U.S. patent 5,868,125 to Maoujoud.

(Either Beasley or Smith et al) teach the invention as described above, but do not teach using a V profile abrasive blade to form the microprisms.

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Maoujoud teaches using a V profile abrasive blade to cut abrasive resistant materials. See abstract and figure 2A.

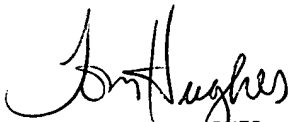
It would have been obvious to one of ordinary skill in the art at the time of the invention to have formed the microprisms of either Beasley or Smith et al with a V profile abrasive blade, in light of the teachings of Maoujoud, in order to provide a faster and more accurate way to form grooves in the substrate.

Contact Information

9. Official documents related to the instant application may be submitted to the Technology Center 3700 mail center by facsimile at (703) 305-3579/3580. Should Applicant desire to submit a DRAFT response to the Examiner by facsimile transmission, then Applicant should contact the Examiner at the number below for instructions concerning the transmission of DRAFT documents. Applicant is reminded to clearly mark any facsimile transmission as "DRAFT" if it is not to be considered as an official response. Examiner Blount may be contacted at the Patent Office between the hours of 9:00 am to 5:30 P.M. Monday through Friday.

10. Any inquiry concerning this communication should be directed to Examiner Steven Blount at telephone number (703) 305-0319.

SB
SB
10/18/01


S. THOMAS HUGHES
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3700